

IDENTIFICATION FORUM:

Red Twin-spot Carpet *Xanthorhoe spadicearia* vs Dark-barred Twin-spot Carpet *Xanthorhoe ferrugata*.

For many years the separation of these two species has caused great problems for recorders. The problem was caused by a misleading piece of information to be found in fieldguides, which has led observers to believe that the presence of a “notch” in the median band is indicative of *ferrugata*. Both species are very variable, and *ferrugata* has an uncommon form which has a red-band instead of the typical dark band.

The result of the false “notch” theory has been that notched *spadicearia* have routinely been claimed as the red-banded form of *ferrugata*. As it happens, in most populations, the red-banded form of *ferrugata* is far from common.

So, given that the notch is a **red herring**, how can observers tell these two apart? In 90% of cases it is relatively easy, once one knows what to look for.

UPPERSIDE:



X. ferrugata



X. spadicearia

If the moth is kind enough to open its wings and lie flat, there are several things to look for. DBTSC tends to have a broader central band, irrespective of colour, that has a deeper “step” to it (where it suddenly broadens, it does so more noticeably). The area beyond the central bar is much less colourful – though, as with all things, be aware of wear. In a typical RTSC there is usually a clearly defined white line along the edges of the central band. The area near the “twin-spots” is richer than in DBTSC, which usually has more isolated “twin-spots”. So what does the infamous red form of *ferrugata* look like? Well here is one and another *spadicearia*:



X. ferrugata



X. spadicearia

As you can see, it still has the deeper step, the chalkier terminal area, and the isolated spots. The edges of the central band are not so well lined with white as in the *spadicearia* and the general tones are not as warm. Contrary to popular belief, red form *X. ferrugata* in south Wales seems to be quite rare.

UNDERSIDE:

So, what if the moth is being wholly uncooperative and not opening its wings (which they commonly choose not to do)? Well, fortunately the underside can be as diagnostic as the upper. In DBTSC, the underside is a far more uniform grey, with little contrast. This is true of both the dark form and the red form. However in RTSC, there is a strongly contrasting pattern, with a deep gingery colouration towards the apex of the wing.



X. ferrugata



X. spadicearia

IN CONCLUSION:

How many of the records on the county database from the last 25 years are likely to have been errors, based on the misleading “notch” theory, is impossible to say. But hopefully with clearer understanding in the future, the picture will be clearer. From my own observations, DBTSC is almost as common as RTSC on the coast, but noticeably scarcer inland. There is some evidence that it becomes moderately common on higher ground, but more analysis of accurate records needs to be made to establish if this is true or not.